

MENTAL HEALTH DELIVERY THROUGH RURAL PRIMARY CARE— DEVELOPMENT AND EVALUATION OF A TRAINING PROGRAMME

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SUMMARY

There is a growing consensus of opinion (WHO 1975) that in developing countries, doctors and para-medical staff of the existing health care cadres should, after a short course of problem oriented training, deliver basic mental health care. This paper describes the development and evaluation of such a training programme.

Systematic surveys of psychiatric morbidity in total populations carried out in various parts of the developing world have shown that the range and prevalence of mental disorders among these populations are comparable to those obtained from the developed countries [Leighton et al (1963) in Nigeria, Giel and Van Luijk (1969) in Ethiopia, Lin (1953) and Lin et al (1969) in Formosa, Dube (1970), Sethi et al (1972) and Verghese et al (1973) in India and Jayasundare (1969) in Srilanka]. They indicate that at any given time, about 2-3% of the population suffer from seriously incapacitating mental disorders or epilepsy. Most of these patients live in rural areas remote from any modern psychiatric facility. The comprehensive reviews on psychiatry in developing countries by Carstairs (1973), Leon (1972), German (1972) and Neki (1973) about their respective areas of Latin America, sub Saharran Africa and South-East Asia, have further highlighted the present status of mental health in their areas and have emphasized the need for better mental health services.

Often, better recognition of problems and availability of effective treatment methods do not result in better delivery of care for the needy population. The gross neglect of mental health needs of the population in the developing countries has been due to poor resources, lack of adequately trained personnel and in this context of overall shortages-higher priority given to killing infectious and communicable diseases. It appears that for a long time to come the poor and developing countries will not have adequate resources to train and afford sufficient number of mental health professionals and organize a mental health care programme.

As a result of the recognition of the extent of mental health problems in the developing countries, several workers have developed innovative and successful programmes involving paraprofessionals and non-professionals in the delivery of mental health care in their respective countries (Schmidt, 1967; Dean and Thong, 1972; Swift, 1972; Climent et al, 1978). It has been suggested that 'basic mental care'—in

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the first instance detection and management of all psychotics and epileptics in the community—should be decentralized and integrated with the general health care services—the primary health care workers and rural doctors—could be trained to deliver 'basic mental health care' (Carstairs, 1973; WHO, 1975; Giel and Harding, 1976; Carstairs & Kapur, 1976). To develop such a model, the WHO has launched a multinational collaborative study in developing countries on 'Strategies for extending mental health care' (Sartorius, 1977).

The WHO Expert committee on mental health in its sixteenth report (WHO, 1975) has recommended that 'countries should, in the first instance carry out one or more pilot programmes to test the practicability of including basic mental health care in an already established programme of health care in a defined rural or urban population' and that ".....training programmes including a simple manual for the training of health workers should be devised and evaluated". Giel and Harding (1976) have suggested that the selection of priority conditions, setting of educational objectives for the appropriate health workers and designing of teaching manuals and methods, in a given situation are the tasks of the local psychiatrists. Wig and Murthy (1978) have pointed out that no clear cut model is so far available for the delivery of mental health services and their feasibility has not been demonstrated in the setting of their country (India). At the National Institute of Mental Health and Neuro Science (NIMHANS), Bangalore, India, a programme for the delivery of mental health care in rural India through the existing health care channels is presently being evaluated (Kapur, 1975; Isaac and Kapur, 1980). The present study is part of this ongoing work. It also forms part of a multicentre evaluative project on delivery of mental health care through primary health centre being conducted by the Indian

Council of Medical Research.

This paper aims to communicate the development and evaluation of a pilot training programme in basic mental health care for primary health care personnel in rural India. Katz (1978) has recommended that the evaluation of any training programme for health personnel should describe ".....how the programme functions, in what context it operates, what problems of issues it encounters, what unintended outcomes it produces and what elements facilitate or impede its success". The various aspects of the present programme are reported here based on the broad guidelines set by Katz.

1. Context:

The mental health training was carried out in a Primary Health Centre (P.H.C.). Primary health care in rural India is delivered through these government financed PHCs. Each centre caters for a population of roughly 100,000 and has on its staff, doctors, nurse, pharmacist and multipurpose health workers, the last being non-professionals who have been specially trained to conduct specific basic preventive and promotive health care tasks. It was planned to train these health workers and the doctors of a PHC to deliver basic mental health care, in addition to the various primary health care tasks which they were already fulfilling.

The training programme was conducted in the Anekal PHC of Bangalore rural district (about 50 kms. away from the city of Bangalore). The PHC at Anekal—a typical PHC—is manned by a Medical Officer and a lady Medical Officer. Under the PHC, there are two primary health units (PHUs) manned independently by two other Medical Officers and four subunits visited weekly once by one of the PHC or PHU doctors. 28 multipurpose health workers—both male and female (formerly called by various terms like health visitor,

vaccinator, auxiliary nurse midwife etc.) are attached to the PHC and work in various parts of the catchment area of the PHC under the broad supervision of the PHC Medical officer. After initial consultation with the PHC doctors and multipurpose workers (MPWs) regarding the place, time feasibility etc., of the training programme, it was decided to hold the training only for the two doctors of the PHC and 11 MPWs who worked closest to the PHC at Anekal. It was not possible for the other doctors and MPWs to assemble at the PHC even once weekly without interfering their routine work.

2. Objectives:

The broad objectives of the training for MPWs were to train them to do the following tasks:

- (1) Detect all cases of severe mental illness, severe mental retardation and fits in their respective areas of work.
- (2) Refer these cases to the PHC doctor.
- (3) Follow up these cases once the doctor has started them on appropriate treatment.
- (4) Educate the family and community in taking care of these cases.
- (5) Attend to psychiatric emergencies and give them first aid.

The PHC Doctors were trained to:

- (1) Diagnose and manage typical cases of psychosis, epilepsy, mental retardation with associated problems and psychiatric emergencies referred to them by the MPWs.
- (2) Refer cases which they cannot manage to the district level psychiatrist for further management and receive these cases back, if referred back.
- (3) Supervise the MPWs in the follow up of all detected cases.

3. Trainee characteristics:

(a) *The PHC doctor:* The average PHC Medical officer in India is an MBBS graduate from one of the medical colleges in the country. He has multifarious responsibilities in the PHC like running the daily out-patient clinic, looking after about 5 inpatients, doing the administrative and promotive health activities, implementing the national health care programmes especially the family planning programme, conducting medicolegal investigations including post mortems etc. He has very inadequate knowledge of psychiatry primarily because of the extremely poor curriculum content of psychiatry in the undergraduate medical course in the country. Psychiatric patients are rarely taken to him at the PHC, and on such occasions he is helpless and can only refer these cases to the mental hospital.

(b) *The multipurpose worker:* The multipurpose worker (male and female) is a person who has completed his schooling for 8 to 10 years and is trained over a short period of time to do certain preventive and promotive health care tasks. He/she is essentially a field worker whose tasks include vaccination, family planning motivation, health education and identification and follow up of cases of malaria, tuberculosis and leprosy for which there are national control programmes in operation. In addition, the female workers are trained to conduct deliveries and carry on the maternity and child health programme. The MPWs also maintain statistics of births and deaths in their respective areas. They have had no training in mental health and presently their tasks do not consist of any mental health work.

4. Resources:

(a) *The instructional material:* The instructional materials used for the training were two separate manuals of instruction—one for the PHC doctor in English and the other for the MPW in vernacular. These

manuals were prepared by the authors, based on the broad recommendations of WHO (1975) and the objectives of the present training, mentioned already. The exact format and contents of these manuals had evolved out of the three years experience gained by the investigators from their experimental rural community mental health centre attached to NIMHANS, Bangalore. Pilot training manuals for PHC doctors and MPWs, constructed earlier were tested and evaluated at another PHC in Karnataka, India (Isaac & Kapur, 1980). The results of this evaluation and the various problems met with in this training programme helped the investigators to revise the manuals and redesign the programme. A brief description of the manuals thus revised and used for the present study is given in the appendix

(b) *The Personnel:* The actual training for the PHC doctors was conducted by a psychiatrist (MKI) and for the MPWs by a psychiatrist and a psychiatric social worker (CRC, RP). The training was conducted in the setting of the PHC and the trainers travelled from Bangalore to the PHC on the days of training.

5. *Process:*

(a) *Method of training:* The training was completed in 15 weekly sessions of 2 hours each, 13 of which were for the training purpose and the remaining two for pre-training and post-training assessment. Separate sessions were simultaneously conducted for the doctors in English and MPWs in the local language, Kannada. These were held on a day of the week and time suggested by the doctors and MPWs as most convenient to them. The sessions were informal lectures based on the manuals, followed by discussion. All sessions were accompanied by either live case presentations or presentation of clinical stories. In later sessions many live cases were brought by the MPWs or doctors themselves.

(b) *Evaluation of the training:* The training was evaluated by an assessment of the theoretical knowledge gained by the trainees and enquiring into any attitudinal change which occurred due to the training. This was achieved by comparing a simple post-training assessment of their attitudes and knowledge regarding mental health with their pre-training performance. The assessments consisted of two parts. The first part was administration of a questionnaire which inquired into their knowledge and attitude regarding causation and methods of treatment of severe mental illness and epilepsy. This part was identical for both the doctors and health workers, but the doctors questionnaire contained, in addition a section on investigations needed for the diagnosis and management of mental illnesses and epilepsy. The second part of the assessment for doctors consisted of presenting them with a series of simple clinical histories of different neuro-psychiatric conditions. They were required to answer certain questions based on these clinical histories on diagnosis and management—names, dosages and side effects of drugs etc. Definite answers for all the questions on all the clinical histories were formulated by the investigators and the credits for each correct answer was determined. Based on these, the answers of the doctors were assessed. The second part of the assessment for the multipurpose workers consisted of seven open ended questions on types and management of mental illness and epilepsy. Certain definite informations (contained in the manual of instruction) were expected and credits for this was determined. The assessment was based on this.

6. *Effects:*

(a) *Results of the evaluation:* Analysis of the pre and post training performances of the doctors revealed that most of their answers to the first part of the assessment (attitudes, causes, treatment methods and

investigations needed for mental illness and epilepsy) was satisfactory even before the training. But the post-training answers showed that the role of EEG, skull X-rays and blood tests in diagnosing epilepsy and mental illness was clarified by the training. The second part of the pre-training assessment highlighted their ignorance regarding psychiatry. They were not able to correctly diagnose or name the drugs used for any of the cases in the clinical histories except epilepsy. But after the training both the doctors were able to correctly diagnose all the clinical stories, mention correct names of drugs and dosage ranges, the commonest side effects of these drugs and their management. They also knew the necessary duration of treatment. The evaluation of the MPWs showed that there was a definite change in their knowledge and attitudes towards the positive side revealing that the training was useful.

DISCUSSION

The present study has only attempted to test the practicability of integrating basic mental health care into an already established programme of health care in a defined, predominantly, rural population of a developing country. The study, in fact, evaluates the manual and methodology of training in basic mental health care devised by the investigators. While reporting such an exercise, if one concentrates only on the objectively obtained statistical data, a lot of vital knowledge gained through experience would get left out. Hence the authors chose the descriptive style to report the present work.

The PHC as the venue of an inservice training programme and the instructors travelling from their headquarters to the rural centre for purposes of training, as attempted in the present model, may not be feasible on a larger scale. Although this model has the advantages of the setting of training being very real, the availability of

clinical problems as they present in the PHC, and the doctors and MPWs not having to stay away from their routine work, it presented the problem of the trainees not being able to fully concentrate on the training due to their routine pressures of work. The case material available in the PHC was predominantly of the non-psychotic, non-epileptic variety, while the primary aim of the training was to equip the doctors and MPWs with adequate knowledge on identifying and managing on a long term basis, the untreated epileptics and psychotics in the community. Hence, the ideal way of implementing the training programme for a large number of personnel in a short time would be to conduct a short-term intensive practical inservice training in a specially created rural mental health training centre with a setting similar to that of a PHC.

The present model has attempted a 2 tier training programme in which the MPWs as well as the doctors of the PHC are trained. This is in contrast to other models where only the health workers are trained, not only to identify cases, but also to start treatment on their own for typical cases and refer cases whenever necessary straight to the District level or state level specialist team. The authors feel that the present model is better suited to most parts of the Indian setting. At present all the national health care programmes in India are implemented through a two tier model involving not only the health workers but also the PHC doctor. The only programme where the MPW has exclusive curative responsibility is the national malaria eradication programme (N.M.E.P) wherein they are taught to distribute antimalarial tablets to suspects. Even in this programme the primary health centre is not excluded as the blood smears collected by the health workers are examined at health centre. With more than 100 medical colleges with a total annual intake of about 13,000 students

during the last several years, lack of availability of a trained medical doctor at the PHC is no more a valid argument for excluding the doctor in the programme in the present Indian context. However in many other developing countries, similar situations may not be available, and the health workers may have to be given additional responsibilities of diagnosing and administering drugs.

The manuals of instruction used in the present study differs in certain ways from the ones suggested by Giel and Harding (1976) and the flow-charts used in the WHO collaborative project on 'strategies for extending mental health care' which teach the health workers to use medications like chlorpromazine and phenobarbitone (personal communication—Murthy and Wig). The authors found that the health workers found diagrammatic representations confusing and they were more amenable to learning through discussions. In the present model the tasks of the health workers were only detection, mental health education and follow up of cases and not differential diagnosis and pharmacological management and hence, they did not need elaborate flow charts for training.

Although management of the epileptics and psychotics was the primary aim of the training, the PHC doctor came across a large number of non-psychotic psychiatric conditions which he could not satisfactorily manage. It is worth considering whether management of non-psychotic psychiatric problems should form an important part of the training. Training a rural doctor on the specific psychopharmacological and social management of epilepsy and psychosis is feasible, but attempting to train him to manage other conditions would raise several questions.

The method of evaluation employed in this model needs a comment. While evaluation of the theoretical knowledge gained by the training programme is important,

evaluation of its ultimate practical utility in decreasing the morbidity in the population it covers is more important. A long term evaluation of the ability of the MPWs to pick up, refer and follow up epileptics and psychotics in their areas of work and the ability of the PHC doctor to manage these cases, thus bringing down the overall neuropsychiatric morbidity would be the ultimate test of the effectiveness of such a training programme.

A genuine commitment on the part of the state health care machinery is extremely essential for the implementation of these programmes. Long term evaluations of several such efforts only would lead to better delivery of mental health services in the developing countries.

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APPENDIX

I. Manual of Instructions in Mental Health for Basic Health Workers :

Section I—Introduction :

Importance of managing severe mental illnesses and epilepsy, and the tasks of a multipurpose health worker in mental health care delivery are described.

Section II—Mental Illness :

Consists of 3 subsections on 'What is Mental illness', 'What causes mental illness' and 'How is mental illness treated' gives descriptions of various presentations of mental illness, the important causative factors and the methods of treatment available.

Section III—Epilepsy and other fits :

Consists of the above 3 subsections. The subsection on what is epilepsy also deals with differentiating genuine epileptic fits from hysterical fits.

Section IV—Mental Retardation :

Consists of the above 3 subsections. The subsection on treatment of mental retardation emphasises that there is no cure for mental retardation. The relevance of training the retarded and counselling the parents are highlighted.

Section V—Some common misconceptions about mental illness, mental retardation and fits.

The various misconceptions are dealt within a 'true/false' pattern.

Section VI—Tasks of a MPW

The important tasks namely identification of cases, referral of cases, follow up, education of community and dealing with psychiatric emergencies are dealt in detail.

II. Manual of Instructions in Mental Health for Primary Health Centre Doctors:

This manual consists of 9 sections entitled :

1. Mental Health problems in developing countries
2. Basic mental health care
3. Role of primary health care team in Mental Health care
4. Psychoses : (i) Functional psychoses
 - (a) Schizophrenia
 - (b) Manic Depressive psychoses
 - (c) Reactive psychoses
- (ii) Organic psychoses
 - (a) Acute
 - (b) Chronic
5. Epilepsy
6. Mental Retardation
7. Psychiatric emergencies
8. Other psychiatric problems in primary health care practice.
9. Problems in delivery of mental health care through PHCs.

NOTE : Copies of these manuals can be had on request.